## PUBLIC WORKS IN CHICAGO.

REMARKABLE ENGINEERING ENTERPRISES. THE COURSE OF THE RIVER TO BE CHANGED-PECULIAR TOPOGRAPHY OF THE CITY.-TUN-NELS AND WATER-WORKS.

CHICAGO, May 23 .- The little river from which this city takes its name is soon to be made to perform a feat which must scenre for it conspicuous mention in all future school geographics. It is about to be made to run backwards. Its "mouth" is to become (what, indeed, a mouth cught to be) its inlet. It is to undertake to swallow Lake Michigan-in detail, of course. Chicago would be nothing without her river, which affords some 18 miles or more of harbor and dock age accommodation through the very heart of the cityan inestimable commercial advantage. But the river has threatened, nevertheless, to be the death of the city. Its stagment, offensive waters, carrying the contents of the sewers and the wasteof distilleries and packing establishents, have been, for years, a perpetual menace of pes tilence. People who have never been here naturally suppose the river empties into Lake Michigan. It ought to do so, but it does not, except when there is a freshet. At all other times it exhibits the most swintsh obstinacy and sluggishness. It will neither be driven nor coaxed. To overcome this unwillingness seemed to be and was impracticable. What, then, was to be done? The problem was a difficult one, but it involved the life of Chleago, and the leading men of this city are not the kind to "give it up," under such cir-cumstances. To have the grass actually "grow in the streets" would be a humiliation to them and a triumph to their rivals to which it was not in their na-If Brains and Capital and Pluck and Will could save them, salvation should be wrought out. If the river would not run outward, as a Christian, civilized river ought to do, then the stubborn, foolish thing should be made to run the other way, and they ould send its foul waters down into the Guif of Mexico. Accordingly, enormous pumping engines were made to lift the waters of the South Branch over into the Hilmois and Michigan Canal, which flows into the Illineis River, a branch of the Mississippi. But this proved to be an expensive process, and was necessarily intermittent. The remedy was only pertial. Then, surveys having demonstrated its feasibility, they set to work to cut down the "Summit Level" of the canal, so as to establish a natural flow, dispensing with the pumps and with ooks also. During the coming Summer the work will be completed, and the clear, sweet waters of Lake Michi-can will pour into and terough the river channel and the South Branch forever. The North Branch will not share equally with the river and the South Branch the benefit of this arrangement. Whatever additional engineering may become necessary for that Branch will in due time

It may be mentioned that the harbor and dockage privleges of Chicago baving become overtaxed, the pressure to be relieved by the Calumet and Chicago Canal and Deck Company, incorporated and organized in 1869, whose charter provides for the construction of a ship mal about 10 miles in length, connecting the South Branch of the Chicago River with the Calumet River at or near Ainsworth Station, which will render available the Calumet River, harbor, and lake for shipping, dockage, and manufacturing purposes. A Congress appro-priation of \$30,000 has been made for the improvement of he harbor, which sum has been partially expended upon the work. A system of "outside" docks (that is, locks out into the lake) has recently been inaugurated by a kindred Company with a similar title, The Chicago Canal and Dock Company. They have begun on the orth side of the mouth of the river, at the foot of chigan-st., and have nearly completed the dredging and spiling of a canal or slip 3,000 feet long, the sales of earth paying all the cost of excavation; and they intend naking a similar slip at the foot of each alternate street between this and Chicago-ave., being five slips in all. A imilar series of slips and piers is in contemplation on the south side of the river, for the protection of which about 4,000 feet of breakwater have already been constructed. Of the 300,000 inhabitants of this city, nearly 15,000 are from the State of New-York (6,000 is the next highest State representation, which is that of Massachu-setts), so that New-York is pretty well represented here. But notwithstanding the great intimacy of relationship
--both business and social--between the Garden City and the scaboard, and notwithstanding that hundreds and perhaps thousands of your renders have visited Chicago, presume the great majority of these who will see this letter have no very clear conception of the peculiar topography of this city as determined by the river and its branches. They may get pretty correct idea of it by supposing a few correspond ansformations to have taken place in New-York. Let Fouricenth-st., from the East River to Sixth-ave., be rigable river, 500 feet wide, branching off at the av enue at right angles, north and south (forming the lette T), the branches running respectively to the Battery and to Harlem, with about a dozen connecting slips and ca-nals, each from 1,500 to 5,000 feet long. Now set the river sides and the slips and canals be lined with steamers and salling vessels and canal boats, leading and unloading and let the channel be alive with craft coming and going -the lazy steamers and the frantic little tugs bellowing and screaming hideously and threateningly for the next bridge to epen, this noise being kept up at all times of the day and night. Understand that the 300,000 populanearly in the proportion of two eighths on the "North Side" (i. e., north of Fourteenth st, and east of Sixth-ave.), three-eighths on the "South Side" (i. e., south of Fourteenth-st., east of Sixth-ave. and the remaining three-eighths on the "West Side" (i. e. west of Sixth-ave., or all the remainder of the city Now imagine a series of parks and connecting bould vards commencing at the foot of East One-hundred-an twenty-fifth-st., and completely girdling the city on its land sides, terminating on the East River at the foot of Wall-st., its westerly line running through the middle of Jersey City. The East River, of course, represents Lake Michigan, and the North River must be supposed to be land covered with streets and houses. The area of the

city is 38 square miles.

The three populous sections of the city are thus shown to be separated by the river and its branches. They de pend for their communication with each other upo pivot bridges at each alternate street, which, however, pivot bridges at each alternate street, which, however, are a very uncertain dependence, as they require to be frequently swung open to accommodate the conflicting river interest. Hence tunnels became a necessity, and one was accordingly built under the south branch of Washington-st, about a year ago at a cost of half a million dollars; and another, larger, but costing the same, is now nearly completed under the main river at Lasalle-st. The former locality would be represented by Sixth-ave, at Tenth-st, and the latter by Fourteenth-st, at Fifth-ave. The importance of these tunnels will be better appreciated in the light of the following statement, showing the extent of the traffle, both over the bridges and on the river: About six weeks ago 35,300 pedestrians and 4,250 vehicles, by actual count of the police, crossed a single bridge between 6 a. m. and 7 p. m., and 89,300 pedestrians and 18,015 vehicles crossed the main river on four adjacent bridges in the same time. As to the river traffle, in June, July, and August, 1809, there were on an average daily 140 entries and departures of vessels. The completed tunnel has already become a great thoroughfure. A line of vehicles 1,000 feet long may at times be seen passing through it, as near to each other as they can be driven with safety. Accidents at the bridges are of more frequent occurrence than at the New York and Brooklyn ferries. The bridge-men ring a bell as a warning or notice of their intention to open the bridge. Instantly there is a rush to get over it by every one within half a block of it who is intending to cross. From 10 to 50 or 169 people, according to the time of day, approaching from each side, on foot and in vehicles, will fams strive to avoid being delayed till the bridge closes again. Some will succeed in getting across before the bridge of such and in vehicles, will fams strive to avoid being delayed till the bridge days of the builkhead. The stragglers are in danger of being crushed between the railing of the bridge at the last moment. The are a very uncertain dependence, as they require to ago, escape this frightful death by only the harrowes conceivable chance, and has seen a wagon driven off the bridge after it had begun to swing. A bridge-gate is desideratum, and if a satisfactory one could be devised and demonstrated, the authorities would be glad to adopt it and place it on all the bridges. Three or four have been set up, but, proving unsatisfactory, have been removed. An erroneous impression seems to have obtained wide credence that a premium of \$6,000 has been dishiped wide credence that a premium of \$6,000 has been dishiped wide credence that a premium of \$6,000 has been dishiped wide credence that a premium of \$6,000 has been dishiped wide credence that a premium of \$6,000 has been dishiped wide credence that a premium of \$6,000 has been dishiped wide of the successful inventor. Models ar frequently submitted, and a wagon load of them has as cumulated in the office of the Superintendent of Bridges some of which are ingenious and might have been successful, if the inventor could have been at the expense of a demonstration.

coasful, if the inventor could have been at the expense of a demonstration.

"The business center" of Chiengo is the northern part of the "South Side," corresponding with Fourteenth-st. to Bicecker-st., and Sixth-ave. to East River. In the Inside portion of this area are the large hotels. This is the only part of the city which justifies the remark one frequently hears—that Chiengo is like New-York. And it is like the best part of the tensiness portion of New-York. That an immense business is done here is evident to the eye of the visitor, without the necessity of statistical reference. It is claimed, by the way, that the leading dry goods house here ranks next after Claffin and Stewart in the amount of business transacted—that is, third in the United States; and that if the comparison be limited to sales of such goods as are free to competition, it ranks first. The business of the principal comtion, it ranks first. The business of the principa petitor of this house is thought to be of an amount; but \$3,000,000 of it come from retail sales. count; but \$3,000,000 of it come from retall sales. "The
ce Sides of Chicago" provide a phraseology constantly
universally employed. If a stranger should ask at
increase House where Dr. Collyer's Church is, he
life told "it is over on the North Side," without a
pecific reply unless it was desired; just as an inat the Fifth Avenue Hotel for Mr. Beccher's
c., vould be told "it is over in Brocklyn." A business
will tell you in his counting room that he lives over
the west Side." Perhaps he lavites you to dinace
thin, and after dinner, he proposes to drive you
on the "South Side" to call on a friend. The finest
dinace and most costly churches were, until lately,
found chiefy on the South Side, especially on the

the South Side, while the North Side kept pace with it-

the South Side, while the North Side kept pace with it—
these avenues still retain their social preciminence.

Wood is the universal street pavement, though it appears from the official reports to have been chiefly laid
during the last five years. The sidewalks are (outside
of the "business center") almost uniformly wood. A
stone wall is built from the original level to the required
hight, on each side of the street, along the line of the
curb-stone; and from the top of this wall to the house
front or area two-inch planks are laid, forming the sidewalk. In some instances, instead of the two-inch planks,
itwo or three layers of inch boards are laid, the upper
layer being narrow stuff, very carefully and neatly laid,
resembling superior house-flooring. This leaves a space
under the sidewalk for vanits. Hetween the stone walls
the street filling is dumped. In reference to sidewalks,
there is on record this noteworthy official confession:
"In nothing does Chiesgo seem so much to manifest a
lack of that permanency and solidity which properly
belong to a large and prosperous city, as in its sidewalks." Wooden buildings largely predominate. A
large preportion of them stand with gable-end to the
street, and many are but one story high, built long, deep,
and marrow. The houses here have a remarkable migratory disposition or habit, which is especially active at
this time of the year-the "moving time." The corpant, like the turtle, remains in his shell. A friend or
mine, who is a comparative stranger here,
recently called for a pair of boots. which
he had engaged a certain German artist
to make for him a week or two previously. To his surprise, there was a vacant tot where the house and store
recently called for a pair of boots. which
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to make for him a week or two previously. To his surprise, there was a vacant for where, in the module of the
slow and the part of part of the content of the
condition of the building in the set of locomotion to
some other resting-place, and carryi

fleer were 45,857 in all, of which 44,274—nearly nine-tenths—were of wood, 914 were of stone, or iron, and 3,639 of brick.

Upon looking into the "Fire Ordinances" a little, it appears that the first record of any "Fire Limits" to which the Commissioners could refer is as recent as August, 1868. On tracine out the boundaries I found they embrace a very limited area, comparatively; but last August they were considerably extended, particularly on the south side, notwithstanding the continued but injustaken opposition of owners of vacant lots, and of lots covered with wooden structures. "The region beyond" is yet, however, so large, and much of it is so central, and all so accessible, that the consumption of lumber for building purposes is not likely to be sensibly checked by the fire limits. The promptness and efficiency of the Fire Department is admirable. There were no less than 669 fires during the year ending March 31, 1871, including the great fire which destroyed the dry goods establishment of J. V. Farwell & Co., which alone cost the Insurance Companies over \$1,500,000, and the owners an additional million, not covered by insurance. This is the fourth time since 1866 that the annual losses by fire have exceeded \$2,000,000. In 1867-80 only \$600,000. The other hand, there has been three years since 1844 in which the total losses have been considerably less than \$1,000,000; in 1868-60 only \$600,000. The water supply has been a subject of much anxiety. Since the completion of the famed Lake Tunnel, the consumption of water has increased beyond all expectation. In 68-9, the daily average was about 15,000,000 gallons. In the year following, 69-70, it ranged between 2,000,000 and 69,000,000 gallons threatening very soon to attain the limit of the existing means of supply. Additional pumping machinery was accordingly ordered, capable of delivering 36,000,000 gallons daily. But it would take a year to furnish this and get it in operation. Meantime, the situation was pronounced by Mr. Chesbrough to be "truly alarmin

## FOREIGN GOSSIP.

Joseph Petzel, a well-known genre painter, tied at Munich April 25, aged 68. The Academy of Metz has recently lost three of its most valued members—Scontetten, Felix Marichel, and the eminent chemist, Chevrier.

At Frankfort-on-the-Main there has been formed an association for the protection of "baby boarders." By these are meant infants who are farmed

The Emperor William remarked to the Mayor Hedeman who attempted to kiss the royal right hand at the opening of the German Parliament: "This is not a German state-custom, and it is only fit for the ladies."

The great festival in honor of Beethoven, which had to be postponed on account of the war, will take place in his native town of Bonn in August, and will be in all respects conducted in accordance with the

Some of the Frenchmen exiled from their ountry by Louis Napoleon, in 1851, and now resident in England, are about to sue him in his private capacity for tamages for their long banishment. It is said that the heir long banishment. It is said that the ned of the ex-Emperor are about £400,000. Providence permitting, the Emperor William

will this year take his usual course of treatment at Ems, which last year was so strangely and unexpectedly in-terrupted. Last year he went to Ems as the King of Prussia. This year (D. V.) he will go as the Emperor of Germany.

Coperpicus, the discoverer of the system of planetary revolutions, was born in the town of Thorn in 1473. The inhabitants of that town, especially the society of "The Friends of Science," are already making prepara-tions to celebrate his sooth birthday, which takes place on the 19th of February, 1873. A prize of 300 thalers has been offered for the best biography of the astronomer.

French ignorance of the history of the outside world is charmingly exemplified in the following in-cident: A German officer was quartered on a notary public and was well treated; one morning on going into the breakfast-room he was saluted by the hady of the house with the following words: "Monsieur, my husband here and myself cannot agree on a little matter. He says that the Emperor Wilhelm is the son of Frederic the Great, and I say he is his brother." side world is charmingly exemplified in the following in-

The Second Division of the Scotch Court of Session has been engaged in hearing an action on a bill of exchange brought by Dr. Stewart, late of the Paraof exchange brought by Dr. Sewart, face of the Pairs guayan army, against M. Gelot of Paris. The plea of the plaintiff is that the bill in question, which was for \$20,000, was obtained under coercion, and the evidence in support of that plea is composed of the statements of the sister of President Lopez, ex-Minister Washburn and Dr. Stewart relative to the state of affairs under the Lopez Government. Government.

The latest German dramatic success is a five-act play by F. Werther, recently brought out at the Court Theater in Munich. It is called "Mazarin," and treats of the historical intrigue of the Cardinal Mazarin with Anne of Austria, the alleged result of which was Marie Manzini, the first love of Louis XIII. The monarch is represented as on the point of marrying her, when it is made known to him that she is his half-sister. These deli-icate details are judiciously managed. The author was called out at the end of each of the three last acts.

At Lingen, in Hanover, a young servant girl from a neighboring house, in passing the temporary hospital in that town, approached a Uhlan-one of her acquaintances-who was pacing backward and forward on sentry duty before the door. Taking hold of the muzzle of his carbine she held it against her breast, at the same time exclaiming jocularly, "Now you can kill me if you want to!" The words were hardly out of her mouth before the weapon (which was loaded), accidentally went off, killing her instantly.

The French habit of counting chickens before they are hatched is strongly illustrated by the action of a French prisoner of war, at Hamburg. ily with whom he was quartered, and on leaving for nis own country, wishing to express his gratitude to his hosts, he left with them a senied account. losts, he left with them a scaled envelope, to be of after his departure. It was found to contain a left the future French Commander of Hamburg (wi should have been conquered by the French), begging to treat the aforesaid family as considerately as had treated the writer.

Pierre Leroux, the French socialist who died last March, exercised a singular mental control over Madame George Sand. "One can understand," says Heine, on this subject, in his "Lutetia," "that by reason Meine, on this subject, in his bricks, the subjects of her uncanonical turn of mind, George Sand has no confessor; but as all women, even the greatest enthusiasts in favor of emancipation, have always need of masterline authority and guidance, she has, so to say, a literary director of conscience. A sort of philosophical Capucin, named Pierre Leroux. The influence of this excellent man on the talent of his penitent is unfortunately not favorable, for he draws her into obscure the strength of the director of bless only half-developed; he leads her cos and most costly churches were until lately, and chiefly on the South Side, especially on the cauce adjacent to and parallel with the lake—cave, and Michigan-ave. Though great changes con coing or during the last five years in this relate west Side making very large relative galax on

PETROLEUM MINING,

THE THEORY OF CONTINUOUS OIL-BELTS—
DEMONSTRATION BY SUCCESSFUL INVESTIGATIONS—LOCATION AND PECULIARITIES OF
THE GREAT BELT.

To the Editor of The Tribune.

SIR: No history of success or failure in the search for oil can be utterly disinterested; and if the search oil basin in the search of the search for oil can be utterly distanced by the search oil basin in the search of the search the latter. At Oil City, Titusville, and other centers there have been organized Boards of Trade, or Petroleum

angell of Forestville, N. Y., embarsed on the petroleum sea. He enjoyed a large degree of luck—for it was that more than anything else that gave his first ventures success. He soon commenced studying the problem that agitates all shrewd "greasers," viz. the location of the oil belt. He began to collect data bearing on this problem, and to study them by day and night. He conceived and assumed as real this postulate: Exactly corresponding geological data, at two or more points of oil development, are proof of a continuous belt between those points. Or, conversely, an oil belt will manifest the same characteristics everywhere. Taking a series of facts regarding paying wells in one locality, he imagined that, if he could find exactly the same series of facts manifest in another paying locality, he would have two bearings on the same oil belt; and that at any place between these two points he could be certain of the same practical results as had followed drilling at the extremes, viz., oil in paying quantities.

cal results as had followed drilling at the extremes, viz., oil in paying quantities.

The data for which he must find duplicates were these:
(1.) The depth from the surface to the different sand-rocks.
(2.) Distance between the upper surfaces of the different sand-rocks.
(3.) Thickness of the sand-rocks.
(4.) Quantity and quality of the oil indications (called "shows.") found in the second sand.
(5.) Color and gravity of the oil produced by the third sand.
(6.) Texture and temper of the third sand. I have named those indications in the order of their importance as a basis of general opinion as to territory—of course he would look first and most anxiously for those last named, but as these are all fixed scientific data, it is probable that, for purposes of comparing different wells, all are equally im-

and most anxiously for those last named, but as these are all fixed scientific data, it is probable that, for purposes of comparing different wells, all are equally important and decisive. It will be noticed that none of these points of inquiry relate to the more superficial and demonstrative manifostations; they are mainly geological, permanent facts.

Mr. Angell started with the data pertaining to his own wells on Belle Island—a little strip of land in the Alleigheny Biver just below Scrubgrass Station, on the Alleigheny Valley Railway, and about 25 miles, by the river, below Oil City. On this Island, and also on the river bank above (north of) it, was a small but rich oil field; two thick clusters of wells here had for some years been producing. Making himself master of the whole subterranean history of this development, as told by the log-rocks, and his own observation while making wells on books of the drillers, the specimens of sand and other rocks, and his own observation while making wells on Beile Island, he turned his steps to other developed territory in search of the duplicate "picture in the rocks." Proceeding up the river, the most producing territory he found was at Foster Station, nine miles, by river, from Beile Island. Here, on a little area of about 25 acres, rich wells have been for some years pumping, and probably millions of dellars' worth of oil have been taken out. Al. Foster he heard a driller's tale that was an echo to the one he had learned at Scrubgrass. The depth of drill at the first sand, the texture and color of the third sand, the color and gravity of the oil, and the other data, were remarkably identical at these two points, five miles apart by air-line. More than this, Mr. Angell was struck with the fact that this similarity of order, composition, and thickness, was not

than this, Mr. Angell was struck with the fact that this similarity of order, composition, and thickness, was not confined to the sand-rocks, but marked also the intervening and overlying strata. The wells at both points were in all respects fac-similes each of the other.

As another evidence, Mr. A. computed the depth of drill at the two points to the upper surface of the third sand. Measuring from the surface of the river, and deducting at Foster for the natural descent of the river between the two points, he discovered that the upper surface of the third sand is on a dead water level at the two points. On his postulate that similarity of rocks

cause at the points where the river crossed it (Scrubgrass and Foster) the territory had been by actual development shown to be small; the derricks at these points are huddled as closely together as the necessary operations will admit. On so narrow a belt it would be easy to lose the trail; an error of one degree in the compass would lead off the belt in a few rods of progress.

Mr. A. now employed a civil engineer, and for many months was engaged in running numerous lines between Scrubgrass and Foster. Without detailing all the laborious process and study by which he fixed the line, suffice it to say that he finally settled on a line which passed midway between the extremes of development at the two points (Scrubgrass and Foster). In the course of his toscarch, Mr. A. developed another collateral theory, which materially aided him, and if it holds good on all belts is very important. That is: As you digress from the central line of a belt, either way, the third sand grows thinner and the supply of oil less, both finally running out when the limits of the belt laterally have been reached; the nearer the central line the better the territory. This shelving of the rock is from beneath, the upper surface of the third sand being level. This theory was demonstrated by the fact that his central line between Serubgrass and Foster passed at one side the elerative Serubgrass and Foster passed at one side the celebrated Burning Well, on a bend of the river. This well, several years ago, struck an immense gas vein; the tools stuck in the well, the gas took fire, and for seven years was not extinguished. The owners abandoned it. Its location on the edge of what he supposed to be the best width, its failure to produce oil in paying qualities was encouraging.

Having now found the axis of the belt, it was easy to

seasily as he could a thousand dollars in money, depositing and checking against the former precisely as the latter. At Oil City, Tituaville, and other centers there have been organized Beards of Trade, or Petroleum Exchanges, which keep their members and the trade at large well informed of all that concerns the business above ground. Yet none of these organizations have made any effort to collect information, analyze experiences, and make even general eductions which would offer the driller the net results of all experiments, and thus reduce the tremendous chances against his success, if every driller had kept such a record as he might, and concerted intelligent efforts had been made to collate these records, the lines of subterranean wealth could be traced on the surface with a very considerable degree of necuracy. The result would be the saving of milions of dollars annually wasted in blind probing for oil deposits, and the reduction of the business to as safe a basis as in any pursuit. Strange that nothing like a Bureau of Oil Mining exists to this day!

Such investigation as has been made has been empirical in character. The science of oil development can hardly be said to oxist, though recent indications show that it is gestating vigorously. The business of oil development owes what progress it has made to the district of the wind of the success of the control of the success of the succe

selement of of mining. That such a science is possible—asy, that its truth is near at hand—I propose to show by detailing the experiments of an operator.

Prell minary to the narration, a few well-established facts in oil phenomens should perhaps be laid before the general reader. (1) Operators between the such as a such as

generally.)

Mr. Augell's success must result—indeed, it has already resulted—in turning the thoughts of practical men to the study of the theory of oil-beits. This may end in the establishment of the whole business on just such a surbasis as I have indicated. This would make a saving of millions of deliars annually to the producing interest and inure to the direct benefitjof millions of consumers of kerosene. It is certain that with the risks and expenses the producing attached to oil production prices cannot remain and hure to the direct benefit of millions of considers of kerosene. It is certain that with the risks and expenses hitherto attached to oil production prices cannot remain what they are. Therefore, all who use petroleum oil are concerned to have the risks and expenses reduced. In case the results named flow from Mr. Angell's research, he will, while securing a princely fortune to himself, have become a benefactor to his fellows. I believe, as does every practical man who has learned of Mr. Angell's achievements, that it and the theory on which it was based are destined to mark an epoch in the history of petroleum. It is certain, whatever the results, that both the nature and the maner of his discovery of the great oil-beit stamps him as a remarkable man—at least as remarkable among oil men, and that means much to any one who knows the class.

Since the preceding was written I have read in a Pennesylvania paper that Mr. Jonathan Watson of Titusville, the veteran and sagacious operator in territory, has added his significant testimony to the value of Mr. Angell's discovery by securing for himself 1,400 acres of land south of Scrubgrass, which he will test at once. If Mr. W. can find a single point on the central line of the

of, he will probably find rich territory as far southward as the belt extends. It is easier to ascertain its position thus than by expensive and uncertain test-wells put down at a guess. Every foot of the Augeil belt northward of A. & P.'s tract, as far as Petreleum Center, has either been tested or is under contract to be developed. With Mr. Watson (whom the paper referred to calls "the champion oil operator") to follow it southward, we shall ere long have the yet unknown features of the belt developed, viz.: 1. Its extent longitudinally. 2. The continuity of the belt. 3. Its directness, i. e., whether it anywhere deviates from a straight line in the direction marked by Mr. A. Already the minds of wise oil men are reaching out to solve the question whether the oil manifestations of this confinent have a common origin; whether there is not a connecting belt running from West Virginia to Canada. We shall know more as the Angeil belt is followed out.

Janestown, N. Y., May 26, 1871. whether there is no.
whether there is no.
West Virginia to Canada. We
Angeli belt is followed out.
Jamestown, N. Y., May 26, 1871.

## A WORD FOR WESTERN MANUFACTURES. From The Cincinnati Shipping and Commercial List.

It is hardly necessary to allude to the well-It is hardly necessary to allude to the well-understood axion that goods can be manufactured to the best advantage at those points where labor is cheapest, material most abundant, and mechanical power most easily attainable. But in the West this axiom has a peculiar force. Not only does it, in many sections, realize all these conditions, but another, and not less important once, viz., the rapid growth of markets within casy reach. It is safe to say that within the next two decades the population of the States lying West of the Alleghanies will equal that of the whole country at the present time. To supply so vast a population with the necessaries of life; with implements of labor, clothing, &c., will be, to a very great extent, a home or local duty. Notlong hence, too, the South will have resumed its normal condition as a producer, in which section the West will find a market for its cloths, its tools, and its implements of agriculture, which, cheaply fabricated, she can supply to the Southern states at prices with which the East, with its dear labor and high cost of subsistence, cannot successfully compete. which, cheaply fabricated, she can supply to the Southern States at prices with which the East, with its dear labor and high cost of subsistence, cannot successfully compete. When the magnificent resources with which nature has endowed the great West shall be calied into action, they will add annually hundreds of millions.pf dollars to the productions of the nation; and to hasten the development of this vast wealth requires only a wise and liberal polley on the part of the Government—a policy that favors diversification of industry and manufacturing in its various forms. The history of nations demonstrates, beyond the possibility of doubt, that a people who, with raw products alone, attempt to contest for wealth against a people elaborating those products, will be ruinously worsted. The true course then for us is to extricate ourselves as far as possible from dependence upon foreign nations, by converting the raw materials which we raise into forms of use and beauty. This can best be accomplished by setting the cheap mechanical power of the country at work—to make our rivers help us as well as our virgin soils, and to so foster and encourage our industries that capital shall have courage to prepare the equipment through which they may attain to prosperity and permanency.

Mrs. Emma J. Beckett has been a member of the Grace Church Choir in Troy in this State for some years, but having had some trouble recently with the ecclesiastic dignitaries, her services were dispens She refused, however, to withdraw and continued to sing, until, on a recent Sunday, she was suppressed by a policeman on the ground that she disturbed the service, forcibly ejected from the choir and locked up in the flaving now found the axis of the belt, it was easy to Station-House for refractory conduct. Mrs. Beckett now saves the church for damage. ORSINI.

HIS POLITICAL RELIGION-A CONVERSATION WITH THE CONSPIRATOR.

To the Editof of The Tribune. Sin: L was sitting one day in my office when a gentleman introduced himself to my notice by laying a note before me. A opened and read these words: "My Dear G.: Make the bearer of this note welcome; he de serves all you can do for him. His name is Felice Orsini. P. S.—He likes good wine." I raised my eyes to gaze upon the man whose name

was in every paper, and whose exploits in escaping from the strongest dungeon in Austria had converted even his enemies for the time into interested and whole-souled friends. He stood nearly six feet high, was slenderly but compactly built; his feet were, for a man of his size, unusually small; his eye could scarcely be called pleasing in its expression; it did not so much burn as blaze I could not detect a single ray of gentleness in this indomitable man, and wondered whence his patience was derived during those seven weary months when with an old rusty nail he was scratching his way, inch by inch, to liberty. I shook him warmly by the hand, and remembering the P. S. of the letter he had handed to me, called for some wine, took a seat and prepared to listen to some wonderful stories of hair-breadth escapes. I was, however, disappointed; except when excited, he was no great talker, and scrupulously guarded against recounting any of his own adventures; he said that all he had to tell of that matter had been written in his book, and directed the conversation at once into what he called a more practical channel. He wanted money to purchase arms to carry into Paris for, said he, they will be sailly needed before long. He hinted at some approaching change in French political institutions, which, as he said, would give the people a chance to rid themselves forever of the rule of Napoleonism. I said that I thought the people had that opportunity at all times if they possessed the will; and that, lacking that will, all efforts to free them must prove abortive. "That only shows," he replied, "how ignorant you are of the secret springs by which this monster retains his hold upon the French people. They are awed by the boundlessness of his power and arrogance; they are charmed, just as children are charmed by reptiles; they are in a state of stupor, and unless help comes from without they must or, living, must accept the horror of the situation as a permanency. They have forgotten how to think. They will soon forget how to fight. "What is the remedy!" I asked. "Destroy the reptile!" he replied, dog. gedly. I said, "The reptile, as you call him, is one of God's creatures, and must bide God's time." "God's time is now, now," he replied, passionately: "I am one of God's creatures, too, and he will use me to perform this highest service for him. It is a part of our family tradition that while there reigns an irresponsible tyrant, the Orsini must cause his downfall. My ancestors partook of the darkness of the times in which they lived; had they but possessed the same enlightened views of human liberty thich we do now, the world would have been better fo the recognition of this policy, though I perceive it makes you shudder. This doctrine has, for a long time, fallen into disuse, and civilization has been retarded. It is again about to be revived; it never needed more earnest disciples than now; justice, if not a farce, is not only ameliorative, it is retributive."

I made the remark that God took this retributive jus-

tice into his own hands, that it was his especial province.

"Yes," he replied, "through the agency of his creatures. He does not come down from Heaven with his own hand to smite a tyrant; but he inspires the hearts of some (though few) of his people to do so, and these are as surely the chosen people of the Almighty as were the children of Israel. Ay, and they preach a sermon as practical as that delivered from Mount Sinai, and it is sometimes accompanied with great tremblings and social earthquakes." "There is this difference," I observed, between such a sermon and that of Christ: one may destroy a tyrant, the other will in time prevent his growth." "Yes, in time! but until that time arrives who Is to save the millions of people condemned to perpetual Slavery, or premature death, by these audacious puppets who flaunt their purple rags deflantly, scepter in hand, even at the decrees of the God who supplies their nostrils with breath I who but a few determined men, who shall say the justice you mete out to others shall be meted out o you'f Every tyrant is an epicure, and, to gratify his taste for present pleasure, will trample upon all moral and social obligations to the destruction of the security and peace of his subjects. There is but one way in which to cure this evil; make the tenure of such rulers' power incertain and fraught with fear while it lasts. Bad as Prussia now is, she is infinitely better than she would have been, from the fact that her monarchs have had faily to test their food for poison and watch their courners for the dagger."

Then you believe in the doctrine of being governed well through fear of the consequences of governing ill f" I remarked. "Fear," he replied, "acts beneficially upon fools and tyrants. Monarchs, as a rule, partake of th ture of both. They are fools because they do not take the trouble to understand their people's wants, and tyrants, ecause when they do, they will not conform to them, b

they ever so just." What guarantee have you, suppose your summary

method of dealing with tyrants were adopted, that the evil would end here! It might come down from the throne to the cottage, and every man redressing his own grievances with his own hand would produce social archy by placing some personal malice as master where dignified judicial justice should reign," he laws of society are founded upon mutual obligation and mutual dependence. And these laws of themselves are a sufficient guarantee for the protection of life and the conservation of property. But these wretches are above all law; they are as much gods over the peoples as the Almighty is God over them; nay more, for he shows no favor; the chilling frost freezes the blood alike of the King and subject. But these gods can send famine to peoples while they revel in luxury; can and do send the word to decimate whole nations while they and their myrmydons enjoy the blessings of others' industry. Is it not appalling now to reflect that the prosperity of this world may be interfered with and all the blessings of ountiful nature dispersed at the edict of about 20 crowned heads, and about 100 Jew money changers! Would it not be an act of the highest virtue to make all these conspirators a head shorter before they had time to carry out their hellish designs ! It is not alone the evils they themselves commit so mue they engender in others that I am opposed to they engender in others that I am opposed to Look at the priests, who preach and crucify Christ is same breath. Look at the aristocracy, with its loo up wealth which it never worked for. Look at its Look at the priests, who preach and crucify Christ in the same breath. Look at the aristocracy, with its locked-np wealth which it never worked for. Look at its hosts of lawyers, who, after keeping the people ignorant of the laws, swoop down upon their transgressors and make them pay for the misfortune of their irresponsible ignorance. Look at the national corruption of a court's example. No, Sir, this world will never be happy until this diseased limb of society is lopped off. What do you as a surgeon do if a man comes with a shattered limb? You cut it off that you may save his life; and I say, cut off the heads of 60 or 6,000 of these tyrants, to save the millions who suffer and die through the criminal exercise of their power."

I replied, taking up his simile, "I certainly should take off the limb. But that would be, strictly speaking, conservative surgery. But how can you prove that your 50 royal heads taken off to-morrow would feed 6,000,000 stomaches with food, or 6,000,000 people's minds with contentment! Nay, how do you know but that this terrible example might be imitated by the people. It is one thing to preach a good doctrine; it is a quite different thing to preach a good doctrine; it is a quite different thing to preach a good doctrine; it is a quite different thing to be sure the people do not misapply its lessons. The misapplication in this case would enthrone Lynch law above judicial; and instead of units of tyrants we should have tens, hundreds, thousands, perhaps. What you call judicial I call Lynch law."

He replied, "Only that it is administered by an aristocratic and kingly mob, with its armed accessories."

"To prove the fallacy of your reasoning," I rejoined, "suppose that some man should cut of the head of Queen Victoria; what would be the result! We should have another monarch in her place who would possibly be as extravagant, and more cruel and tyrannical than she is, while the taxation of the country would not be lessened one penny."

"You forget," he replied, "that Queen Victoria re

extravagant, and more cruel and dynamical than ease is, while the taxation of the country would not be lessened one penny."
"You forget," he replied, "that Queen Victoria reigns as the chosen monarch of the people, who if their vote was solicited to-day in her favor would as surely reflect her as we are now talking; if the people will to be governed by even a stork and it gobbles them all up I would not interfere. It is only where the power of a monarch is acquired by bloodshed, deception, perjury, and fraud—as in the case of the present Emperor of the French—that I would step in. He seems as though he were not only determined to kill liberty at home but to stife it abroad. I say this man's life is a curse to society, and if it continue, which it will not, the world will some day become convinced of it. Look at Rome, Italy; nay, look at your own free country, all tools of this fool whose breath is only in his nostrils. You may reply, educate the masses and they will see the folly of longer putting faith in such a ruler; but what is education! Does it simply consist in writing a copyhead which declares that Napoleon is the nephew of his uncle; that he is the wisest and best ruler that Prance has been blessed with for this last 500 years; that his private virtues are even greater than his public acts; that he is emilnently religious; that from babyhood upward he has been distinguished for the possession of extraordinary powers of mind; that the prosperity of France depends upon the continuance of his rule; for this is the sum and substance of the school education of young France, pends upon the continuance of his rule; for this is the su and substance of the school education of young Franc and what better is mature France 1 Is not every paper and what better is mature France 1 Is not every paper of advanced views immediately stopped on the plea that the 'public' safety demands it's which means, of course, the Emperor's safety. Is not every club-room packed with police spics so as to cripple public discussion! What is this man that pretends to find brains for the whole country! As an author, beneath notice; as an orator, a laughing stock; as a soldier, a barrack-room or manent, and a bad one at that; as a scholar, contemptible; but as a man how shall he be described! Human language has no word to express his littleness nor his greatness in crime; he will be offered a sacrifice. It will be seen whether this monster's divine mission can withsiand the force of gunpowder."

I saw that it would be useless to attempt to reason this matter any further; our principles were similar, our mode of procedure varied; he satisfied me that arms were needed in Paris. I subscribed. We met often after that. He was quite familiar with the writings ob our

liberal school of thinkers; was a worshiper of flazzini; despised Garibaidi, because he thought he ras too much of a woman; and, after delivering a few leet. "Gariba by the members of the Carbonari knew what his mission portended to the Emperor of the French. How that mission failed—nay, how it really cemented the power of the man he intended to destroy—is a matter of history; but how noble a nature died when the guillottne descended upon that feariess, lion-hearted, but mistaken patriot, can only be known to his intimate friends and to his Maker.

Brooklyn, May 30, 1871. Brooklyn, May 30, 1871.

KU-KLUX OPERATIONS AT SPARTAN-BURG, S. C.

The following are extracts from a private letter written by a soldier of the detachment of United States troops stationed at Spartanburg, S. C.:

letter written by a soldier of the detachment of United States troops stationed at Spartanburg, S. C.:

U. S. Garrison, Brartanburg, May 23, 1871.

My Dear Brother: On the 26th inst. an old werely came to camp and reported that there were 50 masked men at a small colored settlement, six miles from Spartanburg, who had told all the colored men that they had three days to make up their minds to either vote and turn Democrats or be taken out in the woods and be whipped to death. The old wench wanted some Yankees to drive the masked men away. They would not allow any of the colored men out, not even to tork in the fields. On the 27th inst. three colored men clime to the gardson and reported that on Saturday, the 26th inst. the Ku-Klux masked men came to their cablins, and took them out and whipped them until they said they would vote the Democratic ticket. One would not do it and he had his left arm shot clear of. On the same day a white man came into camp, and the following is the statement he made to me: "I run a ferry 14 imiles from Spartanburg, and last night, as near as I can longe. 75 men clothed in white came to the boat at 2 o'diock. They asked if they could cross. I told them I did bot know if I would be doing right to take them over. They told me to hold my tongue and not talk so much. Thy then tied my hands and laid me in the bottom of the boat, and ferried themselves over. They then told gre that if ever I opened my mouth about the transletion they would kill me on the spot. At the same time they held a pistol to my face and made me swear not be mention the matter. When they were out of sight I went to my hands and save alone the spot. At the same time they held a pistol to my face and made me swear not be mention the matter. When they were out of sight I went to my house, which was on that side of the river. In half an hour a masked me how far it was to the railroad. I asked him four or five questions, when he told me is shut up. 'I ask you a civil question,' he said, 'and I want a civil answer. How fa

and started for your camp, resolved to tell fall that I knew."

Last night at 8 o'clock two darkies came to the garrison, and reported that they were working in the grade of the Richmond and Atlanta Air Line Pairoad, one mile from spartanburg. At neon, on going home to dinner, two white men met them at the door of their shanty, and told them they had to "shin out of that." The negroes went to work as usual in the atternoon, and when they went to supper last night the same men met them, and told them that if they slept in that sharty that night they would be in h—l in the morning. The men wanted the negroes to leave the place, but did not give any reason. give any reason.

give any reason.

1 p. m.—Last night 40 armed and masked men came to the house of four negroes, five miles from Spartanburg, and hauled them out of bed and whipped them until they could not walk. The men then set fire to the sharty and rode off. One of the negroes says he knows the horses they rode—that he plowed with one of them yesterday aftermoon. The negroes are a hornd-looking sight. Their backs are all in strings, the flesh hanging down, and their heads are all battered into punice. The fearful. My God! brother, this is a fearful country. It's nothing but Ku-Klux, Ku-Klux, from morning till night. Oh! how I would like to catch four of five of them. The garrison of Spartanburg would never see them, unless they went to the nearest woods. It is impossible for me to explain the situation of this country. The K. K. Ka, as they style themselves, have scared the people out of the locked. They are afraid to speak above a whisper.

GENERAL NOTES. 1

The smooth waves of Universalism in Syrause have been slightly ruffled by the Rev. Mr. Hibbard's andencies toward Ritualism.

Vaccination has received a new lease of life from the testimony of Sir William Jenner, the great English physician, who declares that he would be wanting in his obligation to his six children did he permit them to go unvaccinated.

The pleasant little town of Delaware, Ohio has been stirred to its depths by the scandal of a public cowhiding given to the Rev. Dr. Tombs, by George C. Eaton, for the alleged slander of Mrs. Eaton by the cleri-cal gentleman. The solid men of Delaware have held a meeting and denounced the chastisement as improperly hestowed. It is not clear tow the highly rhetorical reso-lutions passed are to help the Rev. Doctor. Blows with a horsewhip, like hasty words, can not be recalled.

Clergymen are prone to be the fathers of large families, for the reason, it is thought, that poverty is reproductive. A statistician who has been investi gating the subject finds that 450 preachers in New-Engiand have 2,223 children over 15 years of age, which is about five apiece. Those under 15 should be at least half as many, which would give 7; children to each of the ministers, whose salaries do not average more than \$500. The clergymen must remember the words of their Divine Master: "Suffer little children to come unto me, and forbid them not!"

A new monthly paper, to be called The Silent Word, will be published shortly at Washington, D. C., devoted principally to the interests of the deaf and dumb. It is intended that the articles admitted to its coumbs. It is intended that the articles admitted to its columns shall possess a certain degree of literary merit, and that the mechanical execution shall be neat and attractive. There is to be a general department, containing editorials and other original articles, and also a college department, which will be particularly pleasing to dear and dumb students, as well as to those who have a special interest in deaf-mute educational institutions.

Gen. George B. McClellan, the Hon. Allan Thurman, and William Butler Duner the reorganization of the Atlantic and Great Western Railway, have decided to make a final issue of £400,000 of reorganization stock, at £50 per cent, for the purpose of providing funds to meet any contingencies or claims that may arise prior to the sale of the railway, under the decrees of foreclosure. The trustees have, accordingly, authorized agents in London to offer this amount of stock for subscription to the holders of the first issue of £400,000 stock.

On the 26th ult. THE TRIBUNE printed an extract of a private letter from Sing Sing, exposing a very cruel mode of punishment now prevailing in the prison there. An anonymous letter just received from prison there. An anonymous letter just received from
the same place contains the statement that a Quaker
preacher, who had been invited by the chaplain to take
his place last Sunday, was told, on reaching the prison,
that she could not be allowed to fulfill her engagement,
as "one of the inspectors did not approve of women's
speaking in public." The writer hints that the said inspector may, perhaps, have been afraid that the Quaker
woman, true to the humanity of her sect, would, if permitted to preach, take occasion to bear her testimony
against cruelty to prisoners.

[Cl. Directors of the Amorican Peace Society

The Directors of the American Peace Society say in their report that the past year has been one of the most prosperous in the history of the Society, there being most prosperous in the history of the Society, there being a greatly increased interest in the cause of peace. The circulation of The Peace Advocate has been augmented three-fold, and articles on peace and war have been published extensively in the religious and secular newspapers. A numerous corps of writers has been enarged to prepare articles for the Society's publications and the press conerally. Large numbers of pictorial representations of the evils of war have been circulated. There is an increase in interest in the cause of peace at the West. Many agents have been employed and movements made to enlist women in the cause. A Woman's World's Peace Convention is projected to be held in Europe.

If anything were needed to prove the

If anything were needed to prove the wealth, power, and liberality of Presbyterianism in this country, it might be found in the fact that the Presbyteries represented in the Reunited General Assembly, now in session at Chicago, have raised difting the last year, in addition to the usual contributions to missions, Sunday schools, etc., the sum of \$7.607,499 as a special year, in addition to the usual contributions to missions sunday-schools, etc., the sum of \$7.607,499 as a special Memorial Fund, to commemorate the innon of the Old and New Schools in one body. This fund is to be devoted to colleges, seminaries, church extension, extincuishment of church debts, erection of parsonages, houses of worship, etc. Other denominations may have what they call more "liberal" creeds than that of the Prechyterians, but they may be challenged to exhibit the evidence of greater liberality in contributing money for the support and propagation of their faith.

In an article on Modern May Haters, who

In an article on Modern Man-Haters-who are women, of course-The Saturday Review remarks: This sect of modern man-haters is recruited from three classes mainly-those who have been cruelly treated by men, and whose faith in one-half of the human race cannot survive their own one sad experience; those restless not survive their own one sad experience; those restless and ambitious persons who are less than women, greedy of notoriety, indifferent to home life and holding home duties in disdain, with strong passions rather than warm affections, with perverted instincts in one direction, and none worthy of the name in another; and these who are the born vestals of nature, whose morale falls below the sweeter sympathies of womanhood, and who are unsexed by the atrophy of their instincts as the other class are by the perversion and coarsening of theirs. By all these men are held to be enemies and oppressors; and even love is ranked as a mere matter of the sense, whereby women are first subjugated and then betrayed.

The Gloversville Standard remembers Foster, the car-hook murderer, as a pupil at the Janesville

the car-hook murderer, as a pupil at the Janesville Academy, and says he was an "obstreperous pupil." One day Prof. Wilson-a large, powerful man tered to him several doses of that "Spanish g d" which he generally kept in full view in a showoffice, as a warning to such of the students would be inclined to be "fast." Foster's conduct was inclined to be "fast." Foster's conduct was
the Faculty of the school determined not to a
another term. The Christian Union, after eo
statement, adds a commentary as follows: 'W
the pleasure of an aequaintance wint this
powerful' Prof. Wilson; but, in our judgment,
such fellows as he, with his 'doses of Spanish
ministered in the barn, and his 'show-case' of
torture, constantly exhibited, to the shame of
as well as his bad pupils, that are adapted to t
repressing all that is human and developing
tortula in a character like Foster's. Whateve
said of the necessity of corporal punishment
cases and carefully administered, such who
hearly floggers ought to be driven from the set
of the land." Amen!